Technology Transfer Control Plan
To accompany the
Technical Assistance Agreement
Between
Analex Corporation (U.S.) and Comision Nacional De Actividades Espaciales (CONAE) (Argentina)
and
Analex Corporation (U.S.) and Investigaciones Aplicadas (INVAP) (Argentina)
For the NASA AQUARIUS/SAC-D Mission

General: This Technology Transfer control Plan (TTCP) is intended to supply guidance and direction to employees of Analex Corporation (Analex), a subsidiary of QinetiQ North America Operations LLC, and its subcontractors (if any) for protecting United States technology from inadvertent and illegal transfer to foreign nationals employed by any of the parties to the subject Technical Assistance Agreement (TAA) or any other agreement concerning Aquarius. To be effective, a TTCP must identify what technology may be transferred or co-developed through discussion, display, or by physical means such as paper, e-mail, or Internet. It must identify to whom such transfers may be made and it must prescribe means to report the transfers and any violations of the terms of the TAA. Lastly, it must provide a means to both train employees and record that training.

Background: NASA has negotiated an International Agreement in the form of a formal Memorandum of Understanding or MOU (ANNEX A), with CONAE. Per this MOU, NASA will procure launch services for the Aquarius/SAC-D observatory. The MOU calls for the signatories' centers to produce a detailed breakout of the tasks and responsibilities of the parties, which is called the Aquarius/SAC-D Project Plan (ANNEX B), that shall be empowered by the MOU and have the force of an international cooperation agreement concluded by NASA and CONAE on its behalf.

CONAE has contracted with Investigaciones Aplicadas (INVAP S.E.) Argentina for the spacecraft bus.

NASA has contracted with Analex, per Contract Number NAS10-02026 Expendable Launch Vehicle Integration Services (ELVIS), to perform a launch site support role; a safety and mission assurance oversight role; a launch day operations role; a communication and telemetry support role; to provide technical services to the NASA/Analex Launch Engineering Team; provide on-site technical, security, and administrative support; and if required, to provide mission analysis of the following analytical areas: Loads and Structural Dynamics, Dynamic Environments, Stress, Flight Design, Flight Software, Controls and Stability, Thermal/Thermodynamics, Electromagnetic Compatibility & CFD/Aerodynamics; and perform engineering and analyses for the NASA Launch Services Program, all of which necessitates the subject agreement.

The subject Technical Assistance Agreement (TAA) is required so that Analex can carry out its contractual responsibilities for the integration and launch of Aquarius/SAC-D. Analex personnel will perform their work on site from their home office locations, at Vandenberg AFB (VAFB), California, and Kennedy Space Center (KSC), Florida before the launch campaign portion of the mission, and then at VAFB for the launch campaign portion of the mission, in order to assist in getting the ULA Delta II launch vehicle and Aquarius/SAC-D observatory integrated and ready for launch, and other tasks required of it by the ELVIS contract Statement of Work (SOW) (Exhibit 1, ANNEX C).

Analex must be able to work closely with personnel from the NASA Launch Services contracted launch services provider, United Launch Alliance (ULA), the NASA KSC Launch Services Program, NASA Goddard Space Flight Center, NASA Jet Propulsion Laboratory, USAF 30th Spacewing, CONAE, and with the main CONAE spacecraft bus contractor INVAP, in an integrated teaming environment. Analex's work with CONAE and INVAP, may involve any or all of the services, tasks, and technical data described in the ELVIS SOW. That is, Analex must be able to assist in integration of the observatory with the launch vehicle, assess whether its interfaces with ground systems are optimal, assist in solving engineering and technical problems on the spot, and perform other, related work for the Aquarius/SAC-D mission at Vandenberg, CA.

The TAA does NOT include ULA or Analex Corporation's subcontractors; aiSolutions Corporation or Science Applications International Corporation (SAIC). These entities will submit their own license or TAA applications as these prove to be necessary.

The TAA also does NOT include export to any other of the Aquarius/SAC-D partners, such as INPE. Analex is NOT expecting to need to work with any other foreign partners for this mission. If the need arises, a separate TAA or license will be submitted prior to any export, as required.

What may be Transferred: the TAA authorizes Analex to carry out the tasks described in the Aquarius Project Plan and the ELVIS SOW during interaction with CONAE and INVAP employees only and for the Aquarius mission only, and to permit CONAE and INVAP employees to have access to the technical documents described in the TAA. Thus, ANNEXES B and C and Exhibit 2 of the TAA, as allowed in the final State Department license; i.e., the TAA in the form and with the provisos returned to Analex by the Office of defense Trade Controls, describe the techniques, know-how, and technical data that are permitted to be shared.

Training: All Analex employees working on Aquarius are required to have completed Kennedy Space Center (KSC) web based training lessons: "Basic Export Control Program," and as necessary "Foreign National Visit Processing," and Technical Information Exchange." These lessons are provided in CD-ROM format for those who do not have access to the internal KSC website or the NASA SATERN website. All Analex employees working Aquarius will read the Aquarius MOU and Project Plan and the ELVIS SOW. These establish the procedures they are to follow and the limits to their cooperative work with CONAE and INVAP employees.

All training will be recorded by the Analex Export Control Representative.

Operations: From the first moment that Analex and CONAE and INVAP personnel start work until the final moment of such cooperation, Analex personnel will observe the limits to cooperation that the TAA permits. Logs or other records of topics discussed, documents accessed, issues resolved, and other cooperative work will be kept up to date and will be accessible to employees, managers, and NASA alike. Where the topics discussed and the work done are clearly within the framework of the TAA, these records need not be elaborate or detailed. Where there is any question of whether or not the material worked with falls within the bouonds of the TAA, then detailed records of what was discusses, with whom, when, and where must be made. Such records must also be available as before, but it is the responsibility of the senior employee involved to make the Analex PM aware of the matter as soon as possible. If at any time any Analex employee is uneasy about what is being done or discussed, it is perfectly appropriate for the employee to terminate the activity at once and report it to the Analex PM or such person as the Analex PM has designated to receive these reports.

Physical security will be provided by NASA and Analex in accordance with the procedures specified by the Commander, 30th Space wing, USAF. These procedures are stringent and call for 100% escort for all foreign nationals while on Vandenberg AFB. Compliance with these procedures supports this TTCP.

NASA has published its direction, procedures, and guidelines in NASA Program Directive (NPD) 1371.5, coordination and Authorization of Access by Foreign Nationals and Foreign Representatives to NASA and NASA Program Guidance 1371.2, Coordination and Authorization of Access by Foreign Nationals and Foreign Representatives to NASA, use of which is mandated by the ELVIS contract. NASA has also implemented an automated visit control system, the NASA Foreign National Management System (NFNMS). NASA's processes for handling foreign nationals call for checks of various U.S. Government agency lists to determine if individuals have been listed as barred from doing business with the Government or are otherwise to be carefully watched. NASA visit processes will be used to manage visits by CONAE and INVAP personnel to Vandenberg and to meetings, etc., held on the subject of Aquarius. Compliance with these procedures supports this TTCP.

KSC Procedures for foreign national access to KSC and CCAFS are contained in Kennedy Handbook (KHB) 1610.1, KSC Security Handbook, Section 406. These call for a Technology Transfer Risk Assessment (TTRA) for visitors from certain countries and for any visitor who will be on station more than a total of 30 days in one year. This procedure is specifically extended for CONAE and INVAP personnel working at Vandenberg for more than 30 days in one year. Compliance with these procedures supports this TTCP.

Recording: All records, logs, notes, etc., that result from the operation of this TTCP will be maintained under the control of Analex' Empowered Official or Technology Control Officer for five (5) full years after the expiration date of the Technical Assistance Agreement; i.e., five years from June 30, 2014.